We claim:

1. A remote monitoring system for a mobile storage tank having a product container for storing a liquefied gas at cryogenic temperatures, said remote monitoring system comprising:

a sensor system to generate level signals referable to a liquid level of a liquid phase of said liquefied gas and pressure signals referable to vapor pressure of a vapor phase of said liquefied gas within said product container;

a global positioning system connected to said mobile storage tank to generate global position signals referable to a global position of said mobile storage tank in global latitude and longitude coordinates; and

a remote telemetry unit on board said mobile storage tank and responsive to said level signals, pressure signals and global position signals to store data records containing data referable to the liquid level and vapor pressure within said product container and the global latitude and longitude coordinates and to effect a wireless transmission of said data records and a unique remote telemetry unit identification in a standard message structure.

2. The remote monitoring system of claim 1, wherein:

said remote telemetry unit has a control program programmed to periodically activate said sensor system and said global positioning system and to store a plurality of said data records at predetermined time intervals and to effect said wireless transmission of

said plurality of said data records after the storage thereof is complete; and

each of said data records contains time data indicative of a particular time interval in which said remote telemetry unit, said global positioning unit and said sensor system were activated.

3. The remote monitoring system of claim 2, further comprising:

an accelerometer to generate acceleration signals referable to a change in motion of said mobile storage tank;

said remote telemetry unit is response to said acceleration signals; and

said data records also comprise acceleration data referable to the change in motion of said mobile storage tank.

4. The remote monitoring system of claim 3, wherein:

said level signals, said pressure signals, and said acceleration signals are analog signals and said global position signals are in a digital format; and

said remote telemetry unit further has an analog to digital converter to convert said level signals, said pressure signals, and said acceleration signals to the level data, the pressure data and the acceleration data.

5. The remote monitoring system of claim 2, further comprising:

said mobile storage tank further having a cryogenic shield fluid contained within a shield fluid tank;

said sensor system being a first sensor unit;

a second sensor system to generate shield fluid level and shield fluid pressure signals referable to a cryogenic shield fluid liquid level and a shield fluid vapor pressure of said cryogenic shield fluid within said shield fluid tank; and

said remote telemetry unit is also responsive to said shield fluid level and shield fluid pressure signals and said data within said data records are also referable to the shield fluid level and the shield fluid pressure.

6. The remote monitoring system of claim 5, further comprising:

a remotely activated valve to respectively discharge shield fluid vapor from a thermal blanket configured to intercept radiant heat energy otherwise passing into said product container;

said remote telemetry unit having a controller to activate said remotely activated valve; and

said control program having pre-programmed setpoints of unacceptably high vapor pressure and low liquid level within said product container and at least one subroutine activated by the control program upon at least one of the vapor pressure and liquid level reaching at least one of the setpoints and deactivated by the control program when upon each of the vapor pressure being below the unacceptably high vapor

pressure and the liquid level being above the unacceptably low liquid level;

the subroutine being responsive to the clock to intermittently signal said controller to activate at least said remotely activated valve to assume an open position and thereby allow shield fluid vapor to escape from said thermal blanket to be replaced by shield fluid liquid from said shield fluid tank.

7. The remote monitoring system of claim 6, wherein:

said remotely activated valve is a first remotely activated valve to discharge said shield fluid vapor from the thermal blanket;

a second remotely activated valve discharges vapor of said vapor phase;

the controller is configured to activate said first remotely activated valve and said second remotely activated valve; and

said at least one subroutine is a first subroutine to intermittently signal said controller to solely activate said first remotely activated valve and at least a second subroutine to intermittently signal said controller to activate said first remotely activated valve and said second remotely activated valve to assume said open position to respectively allow shield fluid vapor to escape from said thermal blanket to be replaced by shield fluid liquid from said shield fluid tank and said vapor of the vapor phase.

8. The remote monitoring system of claim 6 or ~ claim 7, wherein:

said control program is programmed to continually store said plurality of said data records and to add additional of said data records thereto upon a communication failure and after a pre-programmed time interval to transmit said plurality of said data records and said addition data records added thereto.

9. The remote monitoring system of claim 8, further comprising:

an accelerometer to generate acceleration signals referable to a change in motion of said mobile storage tank;

said remote telemetry unit is response to said acceleration signals; and

said data records also comprise acceleration data referable to the change in motion of said mobile storage tank.

10. The remote monitoring system of claim 9, wherein:

said level signals, said pressure signals, and said acceleration signals are analog signals and said global position signals are in a digital format; and

said remote telemetry unit further has an analog to digital converter to convert said level signals, said pressure signals, and said acceleration signals to the level data, the pressure data and the acceleration data.

11. The remote monitoring system of claim 10 wherein said liquefied gas is helium and said shield fluid is nitrogen.